

for mention last year. This year it was conspicuous in early August in various places.

The thirty-three species of Boleti so far seen at Alstead, besides a few forms not yet satisfactorily placed, are to be found fruiting almost at the same time. In fact, a year ago, twenty-five species were assembled in one day's collecting. As the localities where each kind may be expected with certainty become better known, it may well be possible in a good season to bring all the July and August species together in a fresh state.

NEW STATIONS FOR JUNCUS SUBTILIS.

M. L. FERNALD.

IN September, 1897, a very slender strongly proliferous *Juncus* was found in abundance in shallow water of Mattawamkeag Lake, Aroostook County, Maine. Except for its nodulose leaves and crimson color the plant resembled the well-known floating state of *Eleocharis acicularis*; and as is usually the case with the submersed *Eleocharis* the *Juncus* was entirely sterile. Subsequently the plant was collected in pools by the St. John River at Van Buren, but at this station only sterile specimens were seen.

On the tenth of August last (1901) the same slender floating form of the plant was found in a quiet pool or "bogan" of the St. John River at Fort Kent, Maine. All the submersed plants were sterile, but those which had become stranded upon the muddy shore showed a tendency to flower. These stranded individuals were strongly repent; and they so closely resembled the matted plants of *Ranunculus Flammula*, var. *reptans*, with which they grew, that only the most back-breaking and eye-straining scrutiny would reveal them. The combined search of Mr. E. F. Williams, Dr. B. L. Robinson and the writer during a large part of the afternoon and much of the next forenoon was rewarded by perhaps sixty fertile plants. Of these, however, only a small proportion were yet in flower, and none were in fruit.

A comparison of the flowering material collected at Fort Kent shows it to be identical with the plant found in 1871 by the late Charles E. Smith at the margin of Brassua Lake, Somerset County,

Maine. Mr. Smith's plant has been referred to *Juncus subtilis*, E. Meyer, although by recent authors that obscure species has been treated merely as an aquatic variety of *J. pelocarpus*.

According to Meyer, his plant, collected by Bosc "in uliginosis et rivulis Canadae," was the same as that referred by Michaux to Lamarck's *Juncus fluitans*. The brief description given by Meyer, "Caule radicante foliisque capillaceis, floribus subbinis, perianthii laciniis obtusis, interioribus longioribus, (staminibus tribus?)," agrees with the capillary plant found at various points in northern Maine, except that in the Fort Kent material there are usually 6 (rarely 4) stamens. Engelmann's description of *J. pelocarpus*, var. *subtilis*, drawn from Michaux's *J. fluitans* (collected at Chicoutimi, Quebec), "caule reptante vel fluitante radicante folioso: foliis brevibus setaceis ex axillis proliferis; floribus subbinis 3-andris," agrees with the Maine plant quite as well as does Meyer's characterization.

Juncus subtilis has been very little known since its original description by Michaux (as *J. fluitans*) and by Meyer. In American herbaria it has been known only recently, from Mr. Smith's Brassua Lake material, in most of which the stamens are badly shrivelled or wanting. Owing to this insufficient knowledge of the flower the plant has long been treated as a floating state of *J. pelocarpus*. When Dr. Engelmann first suggested this disposition of the delicate plant it was with hesitation, for the species was then unknown to American botanists and his only acquaintance with it was from Laharpe's notes on the Michaux material.

At Mattawamkeag Lake and at Fort Kent where *Juncus pelocarpus* is abundant both on the shores and in shallow water no tendency to intergrade with *J. subtilis* has been noted. *J. pelocarpus* in water, as well as on shores, is an erect plant with definite caudex, with usually two or three ascending long leaves, and with a well developed dichotomous panicle. The flowers are often modified into tufts of small leaves, but this proliferous tendency is strictly confined to the inflorescence. In perfect flowers the sepals (or at least the alternate ones) are acuminate, and the anthers are distinctly longer than the filaments. *J. subtilis*, on the other hand, is a capillary repent plant, in water often becoming 2 dm. long. The roots are slender and fibrous but no definite caudex is apparent. The setaceous basal leaves are very numerous and elongated, while the axils of most of

the cauline bear fascicles of shorter leaves. The flowers are solitary or few (mostly in pairs) on short lateral or terminal branches; the sepals are obtuse; and the anthers are distinctly shorter than the filaments. With such marked vegetative and floral characters *J. subtilis* seems clearly distinct from *J. pelocarpus* with which it has recently been associated.

Its bibliography and stations are:

JUNCUS SUBTILIS, E. Meyer, Syn. Luz. 31; Laharpe, Mon. 135. *J. fluitans*, Michaux, Fl. i. 191, not Lam. *J. verticillatus*, Pursh, Fl. i. 237, in part, not Pers. *J. uliginosus*, var. *subtilis*, Hook. Fl. Bor.-Am. ii. 191. *J. pelocarpus*, var. *subtilis*, Engelm. Trans. St. Louis Acad. ii. 456; Gray, Man. Ed. 5, 541; Coville in Britton & Brown, Ill. Fl. i. 390. *J. pelocarpus*, var. *fluitans*, Buchenau, Mon. 283. — QUEBEC, Chicoutimi (*F. A. Michaux*, according to Prof. Ovide Brunet): CANADA, without station (*Bosc*, according to Meyer): NEWFOUNDLAND, mud near Bay St. George, Aug. 25, 1897 (*A. C. Waghorne*): MAINE, margin of Brassua Lake, Somerset County, 1871 (*Chas. E. Smith*); Mattawamkeag Lake, Sept. 7, 1897, and margin of St. John River, Van Buren, Sept. 18, 1900 (*M. L. Fernald*); margin of St. John River, Fort Kent, Aug. 10, 1901 (*E. F. Williams, B. L. Robinson, & M. L. Fernald*).

Juncus fluitans, Lam., for which Michaux mistook his Chicoutimi plant is a form of *J. bulbosus*, L. (*J. supinus*, Moench) and is to be expected in northern New England and adjacent Canada. This plant, which has been collected in Newfoundland by Robinson and von Schrenk, differs from *J. subtilis* in its coarser habit, usually bulbous-thickened base, several-flowered heads and more pointed sepals.

GRAY HERBARIUM.

LATHYRUS TUBEROSUS IN VERMONT.

L. R. JONES.

SPECIMENS of an unusual and very pretty sweet pea, *Lathyrus tuberosus*, L., were recently sent to me from Vergennes, Vermont, by Miss Ruth Fisher. This species is a native of Asia and eastern Europe. It occurs also at a single station in England according to